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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/977,396	10/16/2001	Hans Mickelsson	040001-048	3035
37825	7590	11/18/2004	EXAMINER	
ERICSSON INC. 6300 LEGACY DRIVE M/S EVR C11 PLANO, TX 75024			TRAN, DZUNG D	
			ART UNIT	PAPER NUMBER
			2633	

DATE MAILED: 11/18/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/977,396

Applicant(s)

MICKELSSON ET AL.

Examiner

Dzung D Tran

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 16 October 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>08/29/04, 02/07/02</u> . | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

***Specification***

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 13 and 16-18 are rejected under 35 U.S.C. 102(e) as being anticipated by Graves et al. US publication no. 2002/0191250.

Regarding claim 13, Graves discloses a system for integrating a fiber optic fixed access network and a fiber optic radio access network, comprising:

a second edge photonic switch 14b (same as a first multiplexer) for transmitting and receiving the communications with the at least one radio unit 10 and fixed access communications 13c, 13d (page 8, paragraph 0095, line 2, paragraph 0096, line 2) with at least one fixed access subscriber 4c (page 8, paragraph 0096, line 4) wherein the communications and the fixed access communications are multiplexed onto a fiber communication link 17a; and

a first edge photonic switch 14a (same as claimed a second multiplexer) for transmitting and receiving the communications and for transmitting and receiving the

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fixed access communications with a radio unit 10 and a fixed access subscriber 4c (page 8, paragraph 0096, line 4).

Regarding claim 16, Graves discloses in figure 13, the first and second edge photonic switch 14 including Ethernet switches 404 (page 22, paragraph 0191, line 8, paragraph 0194, line 2) that each include a wavelength multiplexer 62, 67.

Regarding claim 17, Graves discloses the wavelength multiplexer performs optical coarse wavelength division multiplexing (page 22, paragraph 0191, lines 10-12, paragraph 0194, lines 6-7).

Regarding claim 18, Graves discloses the fiber optic 17b is connected between the first and second edge photonic switch 14.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1,2, 4-8, 10-12, 14, 15 and 19, 20, 22-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Graves et al. US publication no. 2002/0191250.

Regarding claims 1, 7, 14, 15, 19 and 25, Graves discloses a system for integrating a fiber optic fixed access network and a fiber optic radio access network, comprising:

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at least one radio unit 10 (page 8, paragraph 0095, lines 5-6) for transmitting and receiving communications with at least one mobile unit 8 (page 8, paragraph 0095, line 4);

a second edge photonic switch 14b (same as a first multiplexer) for transmitting and receiving the communications with the at least one radio unit 10 and fixed access communications 13c, 13d (page 8, paragraph 0095, line 2, paragraph 0096, line 2) with at least one fixed access subscriber 4c (page 8, paragraph 0096, line 4) wherein the first multiplexer is connected to each of the at least one radio unit and to each of the at least one fixed access subscriber using fiber optic connections 13c, 13d (page 8, paragraph 0095, line 2, paragraph 0096, line 2), and wherein the S-DWDM carrier wavelengths are pre-assigned to each access multiplexer (12a, 12b, 12c, 12d) (page 8, paragraph 0099, lines 4-5), a wavelength converter 408 of figure 13; and

a first edge photonic switch 14a (same as claimed a second multiplexer), wherein the communications and the fixed access communications are transmitted and received together between the second edge photonic switch 14b (same as claimed first multiplexer) and the first edge photonic switch 14a (same as claimed a second multiplexer) through the fiber optic fixed access network 17a. Although Graves does not specifically disclose radio unit using the wavelength that is different from that used to communication with a fixed access subscriber. However, Graves discloses DWDM carrier wavelengths are pre-assigned to each access multiplexer (12a, 12b, 12c, 12d) (page 8, paragraph 0099, lines 4-5) (e.g. per each of radio unit and fixed access subscriber), therefore, if it not inherent, it would have been obvious that each of radio

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unit and fixed access subscriber can be assigned different wavelength. Furthermore, it is notoriously known in the art that in a DWDM system different wavelength can be assigned per each user or group of users.

Regarding claims 2, 20 and 26, Graves discloses at least one main unit (e.g. core node 16), connected to the first edge photonic switch 14a (same as claimed a second multiplexer), for transmitting and receiving the communications with the first edge photonic switch 14a.

Regarding claims 4, 22 and 28, Graves discloses in figure 13, the first and second edge photonic switch 14 including Ethernet switches 404 (page 22, paragraph 0191, line 8, paragraph 0194, line 2) that each include a wavelength multiplexer 62, 67.

Regarding claims 5, 23 and 29, Graves discloses the wavelength multiplexer performs optical coarse wavelength division multiplexing (page 22, paragraph 0191, lines 10-12, paragraph 0194, lines 6-7).

Regarding claims 6, 24 and 30, Graves discloses the fiber optic 17b is connected between the first and second edge photonic switch 14.

5. Claims 3, 9 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Graves et al. US publication no. 2002/0191250 in view of Nishihara.

Regarding claims 3, 9 and 21, Graves discloses all the limitations except for the system further comprising: means for distributing a reference clock signal through the fiber optic fixed access network at a wavelength that is different from that used to transmit and receive the communications with each of the at least one radio unit and different from that used to transmit and receive the fixed access communications with

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the at least one fixed access subscriber. Nishihara discloses an optical system having a clock master unit 134 (col. 11, line 47) for generating and distributing a clock signal wavelength ( $\lambda_2$ ) 108 through out the optical system. It would have been obvious to an artisan at the time of the invention was made to include the teaching of Nishihara in the transmission system of Graves. One of ordinary skill in the art would have been motivated to do this since clock signal is well known in the art for synchronize the optical signal between the networks (specially in the SONET system) and for achieving accurate retiming, thus, it improves reliability of the optical system.

### ***Conclusion***

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- a. Osaka et al. U.S. patent no. 6,301,032. Optical multiplexing/demultiplexing device
- b. Darcie et al. U.S. patent no. 5,559,624. Communication system based on remote interrogation of terminal equipment
- c. Smith et al. US patent no. 5,920,410. Access network

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dzung D Tran whose telephone number is (571) 272-3025. The examiner can normally be reached on 9:00 AM - 7:00 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on (571) 272-3022. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DT  
11/12/2004

  
**M. R. SEDIGHIAN**  
**PRIMARY EXAMINER**